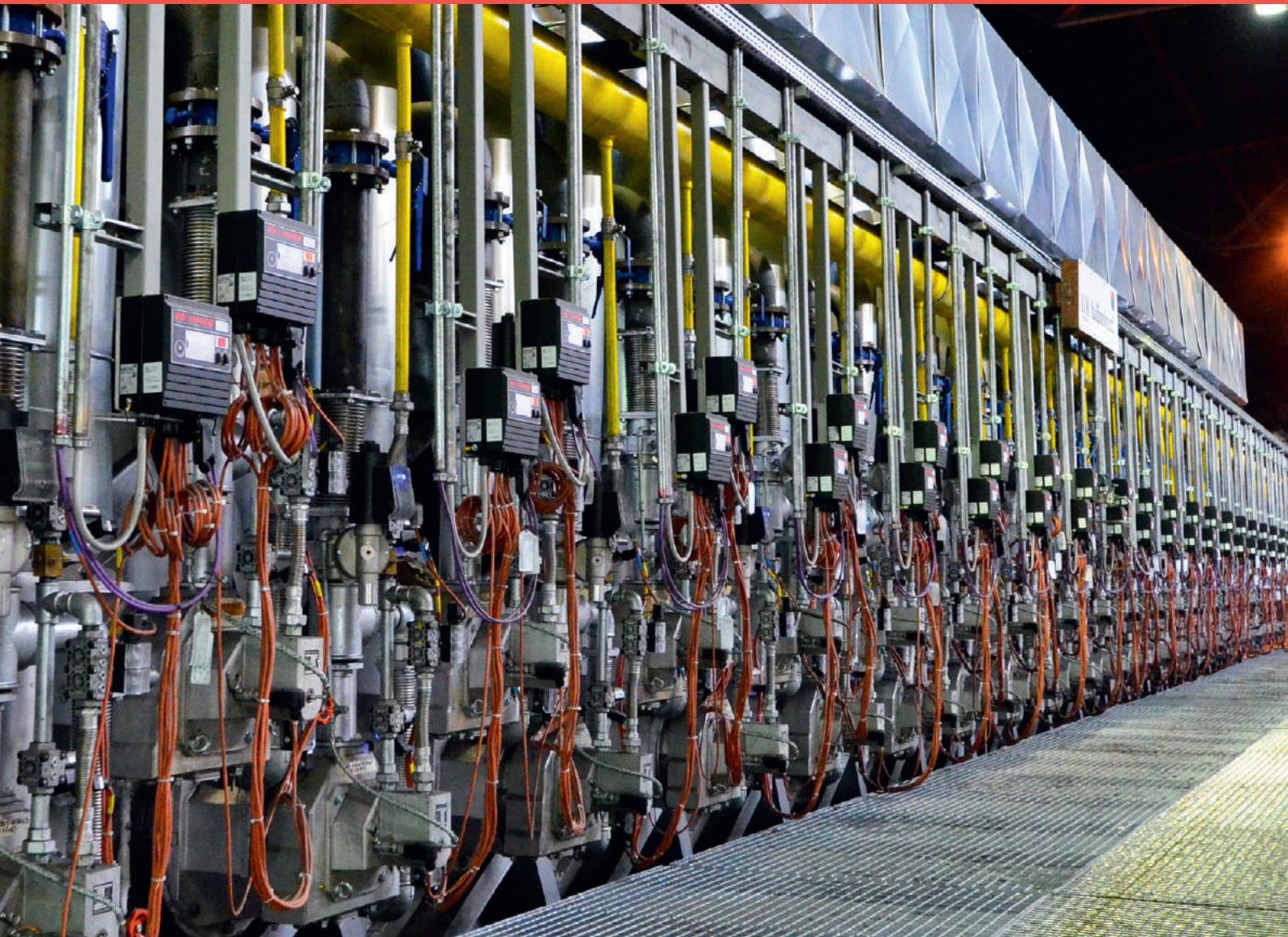


# Boiler tubes finishing line at TenarisSilcotub



# The furnace

Tenaris has invested in Romania USD 60 million to build a dedicated line for finishing power generation products and to process high alloy steel grades up to 12% Cr, thanks to the installation of a new intermediate furnace and a series of upgrades in the hot rolling mill.

## The intermediate gas furnace

between free floating mandrel mill and stretch reducing mill, determines homogeneous and tight wall thickness and outside diameter tolerances throughout the length of the tube. It incorporates latest technology of self-regenerative burners that reduces environmental impact through reduced gas consumption and low level of emissions.

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### THE FURNACE IN NUMBERS

 6 weeks of installation, 24 h/day

 38,000 man hours

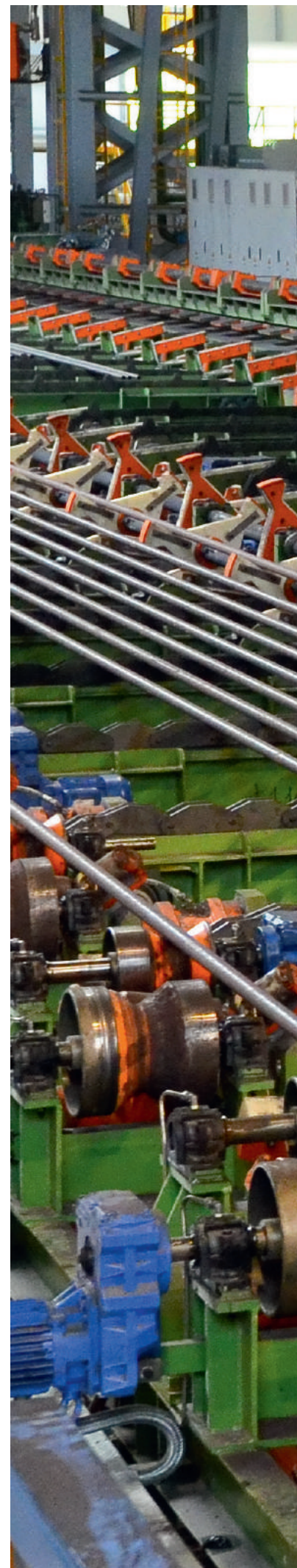
 30 km of cables

 950 tons of steel

 140 tons of refractories

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Xxxxxx





# The finishing line

Thanks to the improvements of process control and through ultrasonic test Tenaris can guarantee 100% outside diameter and wall thickness control over the full length of the tubes.

The finishing line with a capacity of 75,000 tons / year encompasses:

- a heat treatment furnace for normalizing & tempering, isothermal annealing, in order to obtain improved tube mechanical characteristics and better steam flow
- a straightening machine
- an NDT testing
- a cutting machine
- weight & length measurement system, marking and packaging

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## THE FINISHING LINE IN NUMBERS



15 months, from green grass to start-up



55,000 square meters total surface



25,000 square meters of built surface



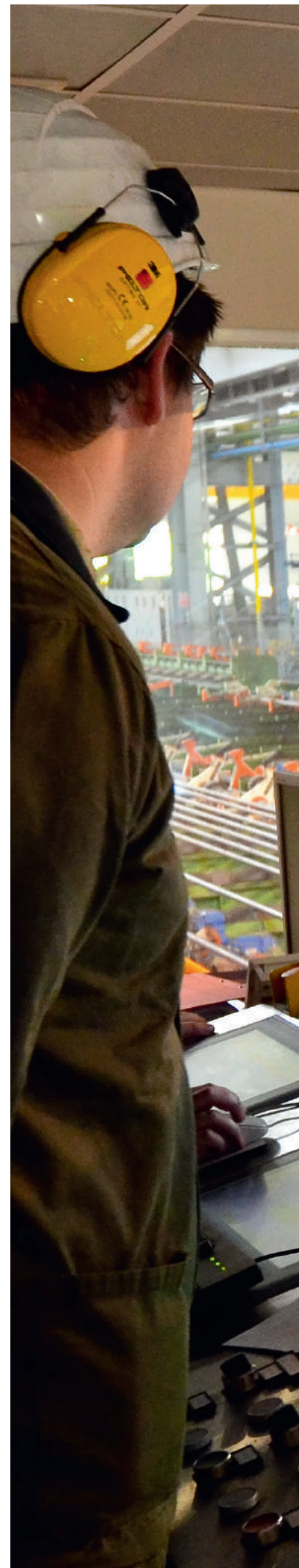
3,500 tons of steel structure

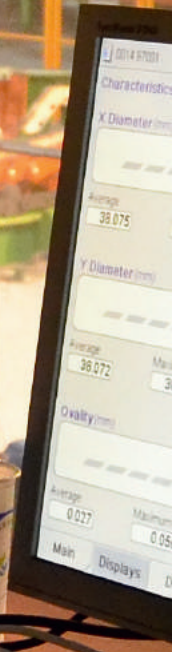
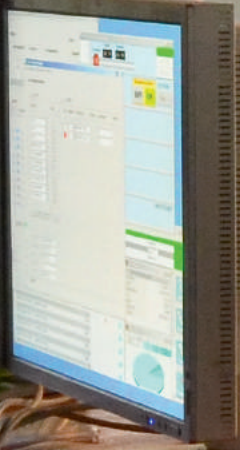
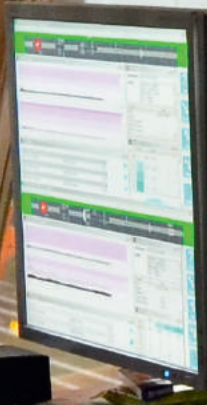


800 tons of equipment

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Xxxxxxx





# Wider offer, more benefits for our customers

With this investment Tenaris is able to offer:

- the longest tubes in the world: 26 meters, allowing to increase the height of the HRSG module saving on space, welding time and cost.
- the most stringent length tolerances:  $-0/+5\text{mm}$  allowing to save costs for pressure parts manufacturers and EPCs.
- tighter wall thickness and outside diameter tolerances: allowing to reduce the weight of the structure, the welding passages while increasing overall efficiency.
- reduced roughness: decreasing pressure drop inside the tubes, thus improving the flow of the power plant.

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## CUSTOMER BENEFITS



**Better products**



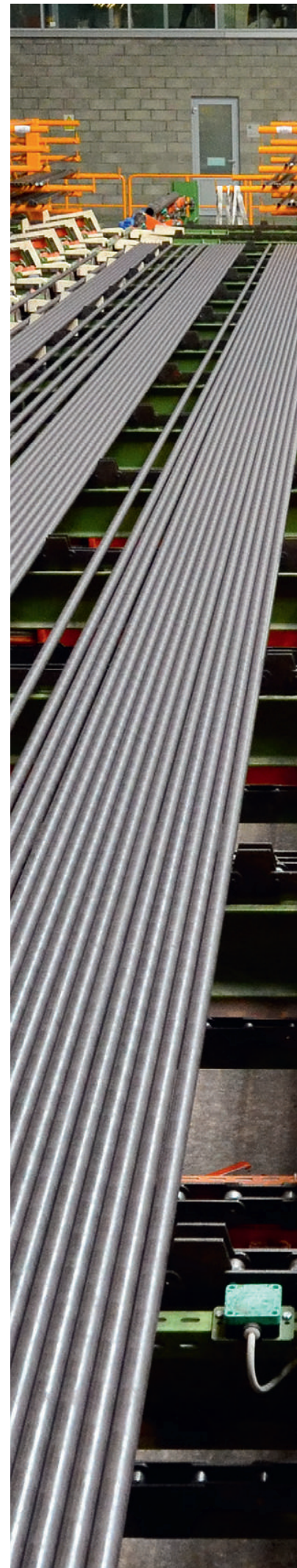
**100% dedicated boiler finishing line**  
to respond timely to product customization requirements

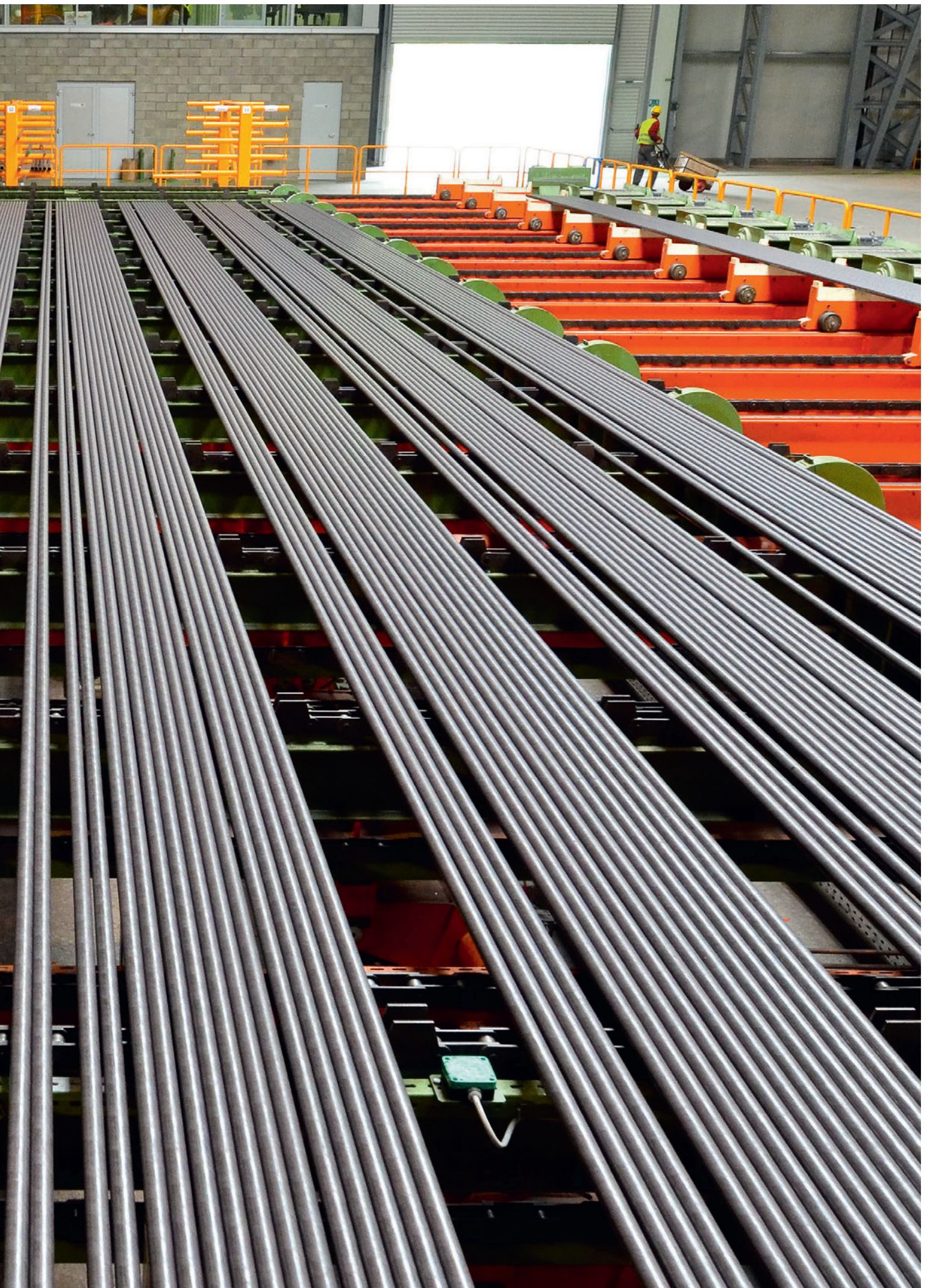


**Improved lead time**  
given its geographical positioning to serve major Power Gen projects and to better integrate with finning services operators



**Fully dedicated team**  
specialized in Power generation including product engineering, offer processing, commercial front end, supply chain







For further information  
[www.tenaris.com/Romania](http://www.tenaris.com/Romania)

The new finishing line for boiler tubes at TenarisSilcotub / January 2019



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